REMARKS

The Official Action mailed June 5, 2003, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to October 5, 2003. Accordingly, the Applicant respectfully submits that this response is being timely filed.

Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on March 31, 2000, July 18, 2000, January 31, 2001, April 9, 2001, and May 24, 2002.

Claims 1-34 were pending in the present application prior to the above amendment. Claim 1 has been amended to better recite the features of the present invention, claims 1, 2, 4, 6, 7, 9, 11-13, 15, 17-19, 21, 23, 24, 26, 28-30, 32 and 34 have been amended to correct minor typographical errors, and new claims 35-40 have been added to recite additional protection to which the Applicants are entitled. Claims 12-34 have been withdrawn from consideration. Accordingly, claims 1-11 and 35-40 are currently elected, of which claims 1, 6 and 35 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 2 of the Official Action rejects claims 1-11 as obvious based on the combination of U.S. Patent No. 4,743,096 to Wakai et al. and JP 1-156725 to Matsueda. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some

teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Wakai and Matsueda do not teach or suggest either applying pulses to a signal line at intervals during one frame, where the intervals are T_1 between the *i*-th pulse and the (*i*+1)-th pulse, $2^l T_1$ between the (*i*+1)-th pulse and the (*i*+2)-th pulse, and $2T_1$ between the (*i*+2)-th pulse and the (*i*+3)-th pulse, where *l* is a natural number and T_1 is a constant period (claim 1); or applying pulses to a signal line at intervals during one frame, where the intervals between the *i*-th pulse and (*i*+1)-th pulse is $2^{i-1}T_1$, where *i* is a natural number and T_1 is a constant period (claim 6). It is noted that claim 6 does not recite pulse width but instead recites controlling an interval between pulses such that the intervals are $2^{i-1}T_1$.

The Official Action asserts that Wakai teaches "applying pulses to the signal line at intervals of $2^{i-1}T$" (page 2, Paper No. 10, citing column 5, lines 3-10 and Fig. 8). The Applicants respectfully disagree. Wakai appears to teach "a period that is equal to the selected period T" (column 5, lines 7-8). However, Wakai does not teach or suggest an interval between two pulses, much less specific characteristics of the interval between two pulses. Matsueda does not cure the deficiencies in Wakai. The Official Action relies on Matsueda to allegedly teach a switching element. Wakai and Matsueda, either alone or in combination, do not teach or suggest either applying pulses to a signal line at intervals during one frame, where the intervals are T_1 between the *i*-th pulse and the (*i*+1)-th pulse, $2^l T_1$ between the (*i*+1)-th pulse and the (*i*+2)-th pulse, and $2T_1$ between

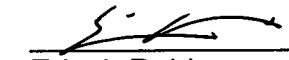
the (i+2)-th pulse and the (i+3)-th pulse; or applying pulses to a signal line at intervals during one frame, where the intervals between the i-th pulse and (i+1)-th pulse is $2^{i-1}T_1$.

Since Wakai and Matsueda do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are in order and respectfully requested.

New claims 33-38 have been added to recite additional protection to which the Applicants are entitled. Claims 33-28 recite that an interval is $2^{i-1}T_1$ between the (i+3)-th pulse and the (i+4)-th pulse. For at least the reasons stated above, the Applicants respectfully submit that new claims 33-38 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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